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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,257	07/18/2003	Ilan Golecki	H0003315	3289

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LAHIVE & COCKFIELD, LLP.
28 STATE STREET
BOSTON, MA 02109

EXAMINER

GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,257

Applicant(s)

GOLECKI ET AL.

Examiner

Jill M. Gray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 24-27 is/are allowed.
- 6) ☒ Claim(s) 7, 8, 11-16 and 18-23 is/are rejected.
- 7) ☒ Claim(s) 9, 10, and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/18/03.
- ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 3/31/04.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4 and 7-21 are, drawn to a method, classified in class 427, subclass 372.2.
- II. Claims 5-6 and 24-27, drawn to an article, classified in class 428, subclass 408.
- III. Claim 22, drawn to a method, classified in class 156, subclass 60+.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and Groups I and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the invention of Group II can be made by materially different processes as evidenced by the different processes of Groups I and III.

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are drawn to separate and distinct methods that do not necessarily result in the same article.

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Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

A telephone call was made to Mr. Gallagher on March 30, 2004 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

An Office Action on the merits of the claims accompanies this restriction requirement as permitted by MPEP 810.01.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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More specifically, claim 16 is indefinite because this claim requires 0-10 weight percent boron nitride, which means that the boron nitride does not have to be present. However, claim 16 is dependent upon claim 15, which requires boron nitride to be present. Accordingly, the metes and bounds for which patent protection is being sought are not clear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7-8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stover, 5,759,622 in view of Holzl et al, 5,286,565 (Holzl) and Thebault et al, 5,686,144 (Thebault).

Stover teaches a method of protecting a carbon-carbon composite against oxidation comprising the steps of applying a glass precursor over the composite, gradually heating to facilitate chemical reaction of the precursor and cooling as required by claim 7. In addition, Stover teaches that his composites are heated within the time and temperature ranges set forth by applicants in claims 12-14. See column 5, lines 60 through column 6 and line 31. As to claim 11, Stover teaches that the glass precursor may be applied by any means but does not specifically teach rotating the composite. In this concern, Thebault teaches impregnating a carbon-carbon composite and rotating the composite for uniform impregnation. This teaching would have provided motivation to the skilled artisan to rotate the carbon-carbon composite of Stover, when immersing so as to uniformly coat the composite. Stover is silent as to the presence of boron carbide glass precursor. Holzl teaches a coated carbon body having improved resistance to high temperature oxidation and method of producing same, said method comprising applying a glass forming coating onto the carbon body, wherein said glass forming coating can comprise a primary glass forming species such as boron carbide. See claims 13 and 17. It would have been obvious to the skilled artisan to modify the method of Stover by using as the glass precursor, a composition containing boron carbide as taught by Holzl, with the reasonable expectation of protecting a carbon-carbon composite component against oxidation at high and intermediate temperatures. As to the amount of boron carbide, per claims 7 and 8, it is the examiner's position that the discovery of an optimum value of a result effective variable in a known process is

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ordinarily within the skill of the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 15 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stover, et al, 759,622 in view of Holzl et al, 5,286,565, (Holzl) as applied above to claims 7-8 and 11-14, further in view of PCT Publication WO93/10057 (the publication).

Stover and Holzl are as applied above, Stover additionally teaching that his glass precursor comprises phosphoric acid, a metal phosphate such as manganese phosphate, wetting agent and water. Stover is silent as to boron nitride and boron carbide as glass precursors. Holzl is as set forth above and would have provided motivation to the skilled artisan to modify the teachings of Stover by including boron carbide as a glass precursor. The publication teaches a protective coating for carbon articles substantially similar to that taught by applicants, said coating comprising phosphoric acid, manganese phosphate, water, boron and boron nitride, wherein potassium hydroxide is included to neutralize the acid, further teaching a borosilicophosphate suspension that is applied to the carbon article and subsequently dried. It would have been obvious to the skilled artisan at the time the invention was made, to modify the method of Stover, wherein boron nitride and boron carbide are included in the glass precursor composition, in order to impart properties such as high thermal stability to the coating and thereby protecting a carbon composite component against oxidation. As to claims 20 and 21, it would have been obvious to apply the method of Stover to any carbon-carbon composite component with the reasonable expectation of obtaining a carbon-carbon composite component that is protected

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against oxidation. Accordingly, the thickness of the component and the specific component is not construed to be a matter of invention, in the absence of factual evidence to the contrary.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 15 and 18-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-15 of copending Application No. 09/518,013 in view of Holzl et al, 5,286,565. Holzl teaches that boron carbide is a known glass precursor in the formation of protective coating on carbon-carbon composites. It would have been an obvious expedient to modify the copending claims by including boron carbide.

This is a provisional obviousness-type double patenting rejection.

Allowable Subject Matter

Claims 1-6 and 24-27 are allowed.

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Claims 9-10 and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

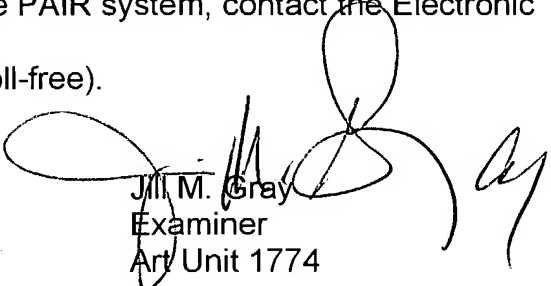
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill M. Gray
Examiner
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jmg